US Patent Application No. 09/888,166
Reply to Final Office Action of April 21, 2006

Attorney Docket No. 2000-0497 / 24061.330
Customer No. 42717

REMARKS

Claims 1-27 are pending. Claims 1, 9, 14, and 22 are amended. No new matter is added as a result of the above amendments. Reconsideration of presently pending claims 1-27 is respectfully requested in light of the above amendments and the following remarks.

Rejections under 35 U.S.C. §112, First Paragraph, Claims 11 and 26

Claims 11 and 26 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. The examiner states that the term "real time equipment status" is not supported in the specification. Applicants respectfully disagree. On page 12 and in Fig. 4 of the current specification, a sample list of real time reports available from the relational database is illustrated which includes a Non-Available Equipment Report indicating equipments that are not available due to being down or awaiting the engineer to check the equipment. Thus, the term "real time equipment status" is supported at least on page 12 and in Fig. 4 of the current specification.

In addition, the examiner states that nowhere in the original specification describes or supports "sending a real time equipment status." On page 12 of the current specification, it states that "user may get the real time status report from the reporting system of the present invention." On page 10 and in Fig. 3 of the current specification, it states that a "Special Reports" function is part of the extraction function. Thus, the user may obtain real time status report from the reporting system of the present disclosure based on the real time equipment status report that is sent to the non-relational database. Therefore, the term "sending a real time equipment status" is also supported at least on page 10 and 12 and Figs. 3 and 4 of the current specification.

Rejections under 35 U.S.C. §112, Second Paragraph, Claims 1, 6, 9, 14, 19, and 22

Claims 1, 6, 9, 14, 19, and 22 are rejected under 35 U.S.C. §112, second paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Regarding claims 1, 6, 14, and 19, the examiner alleges that "a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the

8

same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. MPEP §2173.05(c).

As the examiner has pointed out, MPEP §2173.05(c) is entitled "Numerical Ranges and Amounts Limitations." It states that "[u]se of a narrow numerical range that falls within a broader range in the same claim may render the claim indefinite when the boundaries of the claim are not discernible." However, Applicants respectfully submit that the features as recited in claims 1, 6, 14, and 19 are not numerical ranges or amounts. To the contrary, the features as recited in claims 1, 6, 14, and 19 are steps of a computer-based method of data replication. Accordingly, Applicants respectfully request that the rejection to claims 1, 6, 14, and 19 under 35 U.S.C. §112, second paragraph be withdrawn, because MPEP §2173.05(c) does not apply to the features as recited in claims 1, 6, 14, and 19.

In addition, the examiner alleges that the term "if" does not provide a standard for ascertaining the requisite degree. According to MPEP §2173.05(b) entitled "Relative Terminology," "the fact that claim language, including terms of degree, may not be precise, does not automatically render the claim indefinite under 35 U.S.C. 112, second paragraph. *Seattle Box Co., v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 221 USPQ 568 (Fed. Cir. 1984). Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed, in light of the specification." Contrary to the examiner's allegation, Applicants respectfully submit that the term "if" as recited in claims 1, 6, 14, and 19 does not render the claim indefinite, because one of ordinary skill in the art would understand that the term "if" is part of a determining step as recited in claims 1, 6, 14, and 19.

Similarly, the examiner alleges that the term "responsive" renders the claims indefinite as to what response level the claim recited. Applicants respectfully submit that the term "responsive" does not render the claim indefinite, because claims 1 and 14 specifically recite "responsive to detecting file transactions of the non-relational database". Thus, the level of response is specifically limit to "detecting file transactions of the non-relational database."

As to claims 9 and 22, the examiner alleges that the claims are incomplete as to the database is a place to store data and cannot perform function. By this Response, claims 9 and 22

9

are amended to recite "wherein the at least one data replication server generates at least one real time report."

Accordingly, Applicants respectfully request the withdrawal of the rejection to claims 1, 6, 9, 14, 19, and 22 under 35 U.S.C. §112, second paragraph.

Rejections Under 35 U.S.C. §101, Claims 1 and 14

Claims 1 and 14 are rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. The examiner states that the features as recited in claims 1 and 14 do not provide tangible results. By this Response, claims 1 and 14 are amended to include the limitation of "wherein the file transactions of the non-relational database sent to the at least one relational database are accessible in real time," as suggested by the examiner. Accordingly, Applicants respectfully request the withdrawal of the rejection to claims 1 and 14 under 35 U.S.C. §101.

Rejections Under 35 U.S.C. §102(b), Claims 1, 2, 4, 7-12, 14-15, 17, 20-24, and 26-27

Claims 1, 2, 4, 7-12, 14-15, 17, 20-24, and 26-27 are rejected under 35 U.S.C. §102(b) as being allegedly anticipated by newly cited reference, Martin (US Patent No. 6,029,178 hereinafter referred to as "Martin"). This rejection is respectfully traversed.

Martin does not disclose "responsive to detecting file transactions of the non-relational database, reading the file transactions from the transaction log file of the non-relational database by the at least one data replication server and determining if the file transactions indicate a change in the non-relational database," as recited in amended claims 1 and 14.

The examiner alleges that Martin discloses such features at column 12, lines 33-44, column 18, lines 31-35 and column 19, lines 38-49, which read as follows:

> In the case of a change capture/propagation, the change capture block 264 operates to receive or intercept changed data being made to the source DBMS 104A and actually store the captured changed data in the log 272. The captured changed data then has a transform applied by the transform block 204 before being transported by the move block 206 and transport block 233, it being noted that the transport block 244 is a sub-part of the move block 206. After movement

10

of the captured changed data, the apply block 282 operates to apply the captured
changed data to the target DBMS 104B.

Column 12, lines 33-44.

In step 708 the EDM program initiates a data movement operation to one
or more target computer systems. This occurs, for example, where a command is
received to propagate selected changed data to one or more target databases.

Column 18, lines 31-35.

The data in the archive log 612 is available for processing by the
transform and move task. The EDM logger 602 automatically handles this read
task. If the read task receives a request for data that exists on an archive log 612,
the read task allocates the archive log and reads the data, processes the data, and
sends the data out to the enterprise.

Column 19, lines 38-49.

In the above sections, Martin merely discloses intercepting the changed data to a
source database and storing the captured changed data in a log. At column 18, lines 17-
55, Martin specifically discloses that "if the source database includes a database log for
logging changes, then the EDM process preferably intercepts the changes as they are
made to the database log and logs these changes as change records to EDM log. . . .The
EDM logger provides the changed data to one or more logs, e.g., either simplex or duplex
logs 614 and/or archive log 612." Thus, instead of reading the file transactions from the
transaction log file of the non-relational database, Martin intercepts the file transactions
that are being made to the database log file and logs these transactions to a EDM log.
The file transactions are then provided to an archive log, which is later read and
processed by the EDM logger. Contrary to reading the file transactions from the
transaction log file of the non-relational database, Martin stores the file transactions to a
separate log file, which is later read and processed by the EDM logger. Therefore,
Martin does not disclose the features of claims 1 and 14.

11

By virtue of their dependencies on claims 1 and 14, Martin also fails to disclose the features of dependent claims 2, 4, 7-12, 15, 17, 20-24 and 26-27. In addition, Martin fails to disclose the specific features of dependent claims 2, 4, 7-12, 15, 17, 20-24 and 26-27. For example, Martin fails to disclose "more than at least one data replication server update one of the at least one relational database at a same time," as recited in claims 7 and 20. The examiner alleges that Martin discloses these features at column 12, lines 53-54, and column 19, line 63 to column 20, line 3. However, in these sections, Martin merely discloses that more than one target DBMS may be updated from a single source. Martin does not disclose that more than one data replication server may update one of the relational database. Therefore, Martin also does not disclose the features of claims 7 and 20.

Accordingly, Applicants respectfully request the withdrawal of the rejection to claims 1, 2, 4, 7-12, 14-15, 17, 20-24, and 26-27 under 35 U.S.C. §102(b).

Rejections Under 35 U.S.C. §103(a), Claims 3 and 16

Claims 3 and 16 are rejected under 35 U.S.C. §103 as being unpatentable over Martin and further in view of the alleged Applicants' admitted prior art (AAPA).

As the PTO recognizes in MPEP § 2142:

> ... *The examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness...*

It is submitted that, in the present case, the examiner has not factually supported a prima facie case of obviousness for the following, mutually exclusive, reasons.

1.   Even When Combined, the References Do Not Teach the Claimed Subject Matter

Martin and the alleged AAPA cannot be applied to reject claims 3 and 16 under 35 U.S.C. § 103(a). As discussed in arguments presented above for claims 1 and 14, Martin does

12

not disclose or suggest "reading the file transactions from the transaction log file of the non-relational database and determining if the file transactions indicate a change in the non-relational database." The alleged AAPA also fails to disclose such features.

On page 8, last paragraph of the current specification, Applicants disclose that relational databases 22, 24 may include an Engineer Data Analysis (EDA) relational database or a Manufacturing Execution System (MES) relational database, for example. However, Applicants do not disclose the features as recited in claims 1 and 14, from which claims 3 and 16 depend. Rather, the alleged AAPA merely discloses examples of relational databases to which file transactions may be sent from the at least one replication server. Therefore, the alleged AAPA also does not disclose the features of claims 1 and 14, from which 3 and 16 depend.

Thus, for this mutually exclusive reason, the examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met, and the rejection to claims 3 and 16 under 35 U.S.C. §103(a) should be withdrawn.

2. The Combination of References is Improper

Assuming, arguendo, that none of the above arguments for non-obviousness apply (which is clearly not the case based on the above), there is still another, mutually exclusive, and compelling reason why Martin and the alleged AAPA cannot be applied to reject claims 3 and 16 under 35 U.S.C. § 103(a).

§ 2142 of the MPEP also provides:

> ...*the examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made......The examiner must put aside knowledge of the applicant's disclosure, refrain from using hindsight, and consider the subject matter claimed 'as a whole'.*

Here, Martin and the alleged AAPA fail to disclose, or even suggest, the desirability of the combination of "reading the file transactions from the transaction log file of the non-

13

relational database" as specified above and as claimed in claims 1 and 14, from which 3 and 16 depend. Instead of reading from a transaction log file of the non-relational database, Martin reads from a log file that is separated from the non-relational database. The alleged AAPA merely discloses examples of relational databases.

Therefore, one of ordinary skill in the art would not have been led to modify or combine the disclosures of Martin and the alleged AAPA to reach the presently claimed features. Even, arguendo, if a person of ordinary skill in the art were to make the alleged combination, the resulting combination would still not be "reading the file transactions from the transaction log file of the non-relational database and determining if the file transactions indicate a change in the non-relational database" as specified above and as claimed in claims 1 and 14, from which 3-16 depend.

Thus, it is clear that neither reference provides any incentive or motivation supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. § 103(a) rejection.

In this context, the MPEP further provides at § 2143.01:

> *The mere fact that references can be combined or modified does*
> *not render the resultant combination obvious unless the prior art*
> *also suggests the desirability of the combination.*

In the above context, the courts have repeatedly held that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination.

In the present case it is clear that the examiner's combination arises solely from hindsight based on the invention without any showing, suggestion, incentive or motivation in either reference for the combination as applied to claims 1 and 14. Therefore, for this mutually exclusive reason, the examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met, and the rejection to claims 3 and 16 under 35 U.S.C. §103(a) should be withdrawn.

14

Rejections Under 35 U.S.C. §103(a), Claims 5, 6, 13, 18, 19, and 25

Claims 5, 6, 13, 18, 19, and 25 are rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Martin and further in view of Draper (U.S. Patent No. 6,192,365).

It is submitted that, in the present case, the examiner has not factually supported a prima facie case of obviousness for the following, mutually exclusive, reasons.

1.   Even When Combined, the References Do Not Teach the Claimed Subject Matter

Martin and Draper cannot be applied to reject claims 5, 6, 13, 18, 19, and 25 under 35 U.S.C. § 103(a). As discussed in arguments presented above for claims 1 and 14, Martin does not disclose or suggest "reading the file transactions from the transaction log file of the non-relational database and determining if the file transactions indicate a change in the non-relational database." Draper also fails to disclose such features.

Draper merely discloses "management of transaction logs which contain updates representing operations performed on separate disconnectable computers." (column 1, lines 9-12). Draper does not mention anything about reading file transactions from a transaction log file of a non-relational database or determining if the file transactions indicate a change in the non-relational database. Draper is merely interested in managing a transaction log that already contains updates of operations performed on separate computers. Therefore, Draper also does not disclose the features of claims 1 and 14 from which claims 5, 6, 13, 18, 19, and 25 depend.

In addition, neither Martin nor Draper discloses or suggests the specific features of claims 5, 6, 13, 18, 19, and 25. For example, regarding claims 6 and 19, the examiner alleges that Martin discloses "retrieving a next transaction record, determining if a record type of the next transaction record is one of a delete, put, and update, and determining from the configure file if the next transaction record is to be at least one of deleted, put, and updated in the at least one relational database" at column 9, lines 29-40 and column 10, lines 35-36. However, in these sections, Draper merely discloses movement of bulk data or a single change row from the source

15

database to the target database. Nowhere in the reference does Draper mention determining if the record type of the next transaction record is one of a delete, put, or update. Therefore, Draper also does not disclose the specific features of claims 5, 6, 13, 18, 19, and 25.

Thus, for this mutually exclusive reason, the examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met, and the rejection to claims 5, 6, 13, 18, 19, and 25 under 35 U.S.C. §103(a) should be withdrawn.

2.   The Combination of References is Improper

Assuming, arguendo, that none of the above arguments for non-obviousness apply (which is clearly not the case based on the above), there is still another, mutually exclusive, and compelling reason why Martin and Draper cannot be applied to reject claims 5, 6, 13, 18, 19, and 25 under 35 U.S.C. § 103(a)

Here, Martin and Draper fail to disclose, or even suggest, the desirability of the combination of "reading the file transactions from the transaction log file of the non-relational database and determining if the file transactions indicate a change in the non-relational database" as specified above and as claimed in claims 1 and 14, from which 5, 6, 13, 18, 19, and 25 depend. Instead of reading from a transaction log file of the non-relational database, Martin reads from a log file that is separated from the non-relational database. Draper merely manages a transaction log that already contains updates representing operations performed in separate computers. There is no disclosure or suggestion in either reference of reading from a transaction log file of a non-relational database.

Therefore, one of ordinary skill in the art would not have been led to modify or combine the disclosures of Martin and Draper to reach the presently claimed features. Even, arguendo, if a person of ordinary skill in the art were to make the alleged combination, the resulting combination would still not be "reading the file transactions from the transaction log file of the non-relational database and determining if the file transactions indicate a change in the non-

16

relational database" as specified above and as claimed in claims 1 and 14, from which 5, 6, 13, 18, 19, and 25 depend.

Thus, it is clear that neither reference provides any incentive or motivation supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. § 103(a) rejection.

In the above context, the courts have repeatedly held that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination.

In the present case it is clear that the examiner's combination arises solely from hindsight based on the invention without any showing, suggestion, incentive or motivation in either reference for the combination as applied to claims 1 and 14. Therefore, for this mutually exclusive reason, the examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met, and the rejection to claims 5, 6, 13, 18, 19, and 25 under 35 U.S.C. §103(a) should be withdrawn.

17

US Patent Application No. 09/888,166
Reply to Final Office Action of April 21, 2006

Attorney Docket No. 2000-0497 / 24061.330
Customer No. 42717

Conclusion

It is clear from all of the foregoing that independent claims 1 and 14 are in condition for allowance. Dependent claims 2-13 and 15-27 depend from and further limit independent claims 1 and 14 and therefore are allowable as well.

An early formal notice of allowance of claims 1-27 is requested.

Respectfully submitted,

Wing Y Mok
Agent for Applicants
Registration No. 56,237

Dated: June 12, 2006

HAYNES AND BOONE, LLP
901 Main Street, Suite 3100
Dallas, Texas 75202-3789
Telephone: 972/739-8626
Facsimile: 214/200-0853
Client Matter No.: 2000-0497 / 24061.330
R-136665

18